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movement between the inner tube and the outer tube varies the configuration of the hollow  
4 fibers extending between the inner tube and the outer tube.

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REMARKS

The Office Action dated February 17, 2000 has been carefully considered. In response to the Office Action, Applicants have amended the application. Applicants request that the Examiner consider the following remarks, and then pass the application to allowance.

Claims Under Consideration:

Claims 1-10 and 13 are currently under consideration.

Subject Matter Indicated Allowed or Allowable:

Applicants gratefully acknowledge the indication of allowability of Claims 4 and 8, subject to their re-writing in independent form.

Rejection Under 35 U.S.C. § 112, Second Paragraph:

Claims 1-10 and 13 stand rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claim 1 has been amended to recite that the hollow

fibers are "sealingly coupled to the first heat exchange fluid flow path and the second heat exchange fluid flow path to thereby provide a closed fluid connection between the first fluid flow path and the second fluid flow path." This amendment clarifies the relationship between the hollow fibers and the first and second heat exchange fluid flow paths, thereby obviating the 35 U.S.C. § 112, second paragraph rejection of Claim 1. Claim 3 has been amended to recite that "the inner tube is movable relative to the outer tube," and that "relative movement between the inner tube and the outer tube varies the configuration of the hollow fibers extending between the inner tube and the outer tube." In this manner, the term "properties" has been deleted and the rejection of Claim 3 on the basis of this term is therefore obviated.

**Art Rejection Under 35 U.S.C. § 103(a):**

Claims 1-3, 5-7, 9, 10 and 13 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Berry, et al. (U.S. Pat. No. 4,850,958) in view of Saab (U.S. Pat. No. 5,642,392). Berry, et al. shows a device for *in vivo* extrapulmonary blood gas exchange comprising a bundle of gas permeable tubes 12 which are inserted into the artery of a patient. The tubes 12 have gas permeable walls which effect gas exchange with the blood, aerating the blood and removing waste gas therefrom. Gas is supplied to the tubes 10 via a dual lumen tube 22 such that an inner lumen 26 conveys gas to the tubes 12 while an outer lumen 24 removes gas therefrom. The device of Berry, et al. has an open loop configuration, with the gas reaching the tubes 12 serving to interact with the blood to

release oxygen thereto and absorb carbon dioxide therefrom. The device of Berry, et al. relies upon an exchange of material with the blood of the patient and encounters various limitations associated with such an exchange. These include the need to select a suitable gas permeable material, and the need to control the rate of flow of gas through the tubes, for example by controlling the pressure in the tubes and the concentrations of gases along with their flow rate therein. Berry, et al. neither teaches nor suggests a catheter having hollow fibers for containing heat exchange fluid which is circulated in the hollow fibers in order to effect heat exchange with the body of a patient. As discussed above, Berry, et al. is directed to gas permeable tubes configured to permit passage of gasses between the interior of tubes 12 and the blood. The tubes 12 of Berry, et al. thus serve a different function and are structurally different from those of the presently claimed invention, which requires hollow fibers which are "sealingly coupled to [a] first heat exchange fluid flow path and [a] second heat exchange fluid flow path to thereby provide a closed fluid connection between the first fluid flow path and the second fluid flow path for transport of heat exchange fluid between the first fluid flow path and the second fluid flow path."

Because the device of Berry, et al. is not directed to heat exchange, one of ordinary skill in the art would not have been motivated thereby to combine the teachings of Berry, et al. with those of Saab. Moreover, such a combination would require modification of the Berry, et al. device to prevent gas interaction between the contents of the tubes 12 and the blood of the patient, because such interaction would be counterproductive, and possibly dangerous, during the heat exchange process contemplated by the invention.

**Conclusion:**

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance. Such allowance is respectfully solicited.

If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney, Khaled Shami, at (650) 622-2332.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: \_\_\_\_\_



Khaled Shami

Registration No. 38,745

Post Office Box 1404  
Alexandria, Virginia 22313-1404  
(650) 622-2300

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